

CLAIMS

1. Process for separating NH<sub>3</sub> from a mixture containing NH<sub>3</sub>, CO<sub>2</sub> and H<sub>2</sub>O which comprises an NH<sub>3</sub> rectification step carried out in an NH<sub>3</sub> separation device to which one or more streams containing NH<sub>3</sub>, CO<sub>2</sub> and H<sub>2</sub>O, including the mixture, are fed, with a stream consisting substantially of gaseous NH<sub>3</sub> being formed in the NH<sub>3</sub> separation device, separated from the mixture and discharged, characterized in that a condensation step is carried out on at least one of the stream consisting substantially of gaseous NH<sub>3</sub> or the one or more streams containing NH<sub>3</sub>, CO<sub>2</sub> and H<sub>2</sub>O supplied to the NH<sub>3</sub> separation device, in which at least a part of the existing CO<sub>2</sub> is converted to a liquid phase.  
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2. Process according to claim 1, in which the condensation step is carried out by cooling the stream to be condensed and/or bringing it into contact with an absorbing medium.  
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- 15 3. Process according to claim 1 or 2, the process further comprising, in order to separate CO<sub>2</sub> and H<sub>2</sub>O from the mixture:
  - a CO<sub>2</sub> rectification step, which is applied in a CO<sub>2</sub> separation device to the mixture coming from the NH<sub>3</sub> separation device while a stream coming from a desorption device is supplied, with a stream consisting substantially of CO<sub>2</sub> being formed in the CO<sub>2</sub> separation device and being separated from the mixture, and  
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  - a desorption step, which is applied in the desorption device to the mixture coming from the CO<sub>2</sub> separation device, with a stream consisting substantially of H<sub>2</sub>O being formed and being separated from the mixture, after which the mixture is returned to the NH<sub>3</sub> separation device and/or the CO<sub>2</sub> separation device.  
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- 30 4. Process according to any one of claims 1-3, in which the condensation step is carried out on the stream consisting substantially of gaseous NH<sub>3</sub> from the NH<sub>3</sub>

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separation device in a submerged condenser while an aqueous stream and/or liquid NH<sub>3</sub> is supplied as absorbing medium.

5. Process according to claim 4, in which after the condensation step an absorption step is applied to the stream consisting substantially of gaseous NH<sub>3</sub>, in which the said stream is brought into contact with liquid NH<sub>3</sub>.
6. Process according to any one of claims 1-3, in which the condensation step is carried out as a partial condensation step, by means of indirect cooling with a cooling medium, on the stream that comes from the desorption device and that is supplied to the NH<sub>3</sub> separation device.
- 10 7. Process according to claim 6, in which the mixture present in the NH<sub>3</sub> separation device is used as cooling medium in the partial condensation step.